

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Withdrawn) An objective lens for an optical disk, comprising a bi-aspherical single lens having a numerical aperture of 0.7 or more, wherein a center thickness of the lens is more than a focal distance.

2. (Withdrawn) The objective lens for the optical disk according to claim 1 wherein an image forming magnification in a design reference wavelength is 0 times.

3. (Withdrawn) The objective lens for the optical disk according to claim 1 wherein the design reference wavelength is shorter than 0.45 μm .

4. (Withdrawn) The objective lens for the optical disk according to claim 1 wherein the focal distance is shorter than 4.0 mm and longer than t represented by the following equation:

$$t = d/n + 0.9 \text{ (mm)},$$

in which d denotes a thickness of the optical disk, and n denotes a refractive index of the optical disk.

5. (Withdrawn) An objective lens for an optical disk, comprising a single lens having at least one surface formed in an aspheric shape and having a numerical aperture of 0.7 to 0.8 and an operation distance of 0.2 mm or more, and satisfying the following condition:

$$0.85 < d_1/f < 1.5;$$

$$0 > d_1/R_2 > -0.7; \text{ and}$$

$$n > 1.6,$$

in which f denotes a focal distance of the lens, d_1 denotes a center thickness of the lens, R_2 denotes a curvature radius in a vertex of the lens on an optical disk side, and n denotes a refractive index of the lens.

6. (Withdrawn) The objective lens for the optical disk according to claim 5 wherein the focal distance is 2.2 mm or less.

7. (Withdrawn) The objective lens for the optical disk according to claim 5 wherein a thickness of a transmission layer of the optical disk is 0.3 mm or less.

8. (Currently Amended) An objective lens for an optical disk including a transmission layer having a thickness of 0.3 mm or less, comprising:

a single lens having a first surface on a light source side and a second surface on an optical disk side and at least one surface of the first and second surfaces formed in an aspheric shape, ~~[[and]]~~ having a numerical aperture of 0.78 or more, converging a light, which is emitted by a light source and enters the first surface, at a focal point outside the lens, and satisfying the following condition:

$$d_1/f > 1.2;$$

$$0.65 < R1/f < 0.95;$$

$$|R1/R2| < 0.7; \text{ and}$$

$$n > 1.65,$$

in which f denotes a focal distance of the lens, d_1 denotes a center thickness of the lens, $R1$ denotes a curvature radius in a vertex of the ~~lens on a light source side~~ first surface, $R2$ denotes a curvature radius in a vertex of the ~~lens on a optical disk side~~ second surface, and n denotes a refractive index of the lens; and

having a working distance of 0.3 mm or more, and having a wavefront aberration of 0.04λ (λ is a design reference wavelength) or less when ~~[[a]]~~ the first surface and ~~[[a]]~~ the second surface are not co-axial by $5\mu\text{m}$.

9. (Canceled)

10. (Canceled)